

**ABSTRACT**

A flow probe for use in a humidification system is positioned in a humidified gases flow such as that which is provided to a patient in a hospital environment. The flow probe is designed to provide both temperature and flow rate sensing of the gases flow by incorporating two sensors into the gases flow. The flow probes are shaped and aligned within the gases flow to enable accurate gas flow readings to be taken whilst reducing the occurrence of condensation on the sensors. The flow probe can also be included in a humidification control systems to provide a patient with a desired humidity level or simplify the amount of user input required to set humidity levels. Furthermore, the flow probe can provide a controller with flow information which may then be used to determine certain conditions that could prove to be dangerous to a patient.